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Indian Standard

SPECIFICATION FOR
SHOE POLISH, LIQUID

UDC 665·922 : 685·31

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Gr 3 *August* **1987**

AMENDMENT NO. 1 MAY 1998
TO
IS 12010 : 1987 SPECIFICATION FOR SHOE POLISH, LIQUID

(*Page* 3, *Table* 1, *Sl No.* 1, *col* 2) — Substitute '*Max*' *for* '*Min*'.

(CHD 23)

Reprography Unit, BIS, New Delhi, India

Indian Standard

SPECIFICATION FOR
SHOE POLISH, LIQUID

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Indian Standard

SPECIFICATION FOR SHOE POLISH, LIQUID

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 15 January 1987, after the draft finalized by the Polishes Sectional Committee had been approved by the Chemical Division Council.

0.2 It is a normal practice to give a glossy transparent coating of a wax polish to the upper leather of boots, shoes, sandals, etc, for shining, preservation and presentation value. Different manufacturers of shoe polish have evolved their own compound and formulation and method of application. At present there is a good demand of the product which is suitably formulated, easy to apply, dries up in reasonable time and is easily buffed to a glossy transparent film. Realizing the unscrupulous competition that has beset this item of manufacture, the Sectional Committee responsible for the preparation of this standard agreed to lay down the basic requirements of the material in order to ensure a uniform quality in its supply, and also to serve as a quality guide to manufacturers and consumers of shoe polish in the country.

0.3 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes the requirements, and methods of sampling and test for liquid shoe polish suitable for general application to leather footwear.

2. TERMINOLOGY

2.1 For the purpose of this standard, the definitions given in IS : 8171-1984† shall apply.

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*Rules for rounding off numerical values (*revised*).

†Glossary of terms relating to polishes and related materials (*first revision*).

3. REQUIREMENTS

3.1 Description

3.1.1 *Odour* — The material shall not have a disagreeable odour.

3.1.2 *Colour* — The material shall be manufactured in conventional colours like black, tan (light brown), dark tan (dark brown) or neutral nearly matching the colour of the leather footwear or in any other colour as agreed to between the purchaser and the manufacturer.

3.1.3 *Consistency* — The material shall be easily pourable, free flowing, homogeneous liquid, free from any grits and sedimentation. It shall have no tendency for the separation or crystallization of the constituent materials when tested as prescribed in Appendix A.

3.1.4 *Applicability* — The polish shall spread evenly on the surface without any mottling. The applied film shall not show any tendency to spreading while still being wet when tested as prescribed in Appendix B.

3.2 The material shall also comply with the requirements given in Table 1.

TABLE 1 REQUIREMENTS FOR SHOE POLISH, LIQUID

Sl No.	Characteristic	Requirement	Method of Test (Ref to Appendix)
(1)	(2)	(3)	(4)
i)	Non-volatile matter, percent by mass, *Min*	20·0	C
ii)	Ash of the non-volatile matter, percent by mass, *Max*	3·0	D
iii)	*p*H of the polish	6·5 to 9·0	E

3.3 Shoe polish furnished under this specification shall conform to the requirements thereof for one year from the date of actual delivery when stored in its original sealed container, under cover at 27 ± 2°C and 65 ± 2 percent relative humidity.

4. PACKING

4.1 The polish shall be supplied in sound, clean and dry plastic containers, fitted with in-built applicators for easy application. The container shall be fitted with a cap which may be closed or opened without much difficulty and which shall prevent evaporation and the ingress of dirt.

4.2 The size of the containers shall be preferably 75 ml or as agreed to between the purchaser and the manufacturer.

4.3 The containers shall be packed in cartons and the cartons, in turn, in cardboard or wooden boxes or as agreed to between the purchaser and the manufacturer. Each carton shall be marked with Batch No.

5. MARKING

5.1 The following information shall be clearly indicated on the outside of the container:

a) Manufacturer's name and/recognized trade-mark, if any;
b) The net volume of the material when packed;
c) The words 'Shoe Polish, Liquid'; and
d) Colour of the polish.

NOTE — Any other marking required under Weights and Measures (Packaged Commodities) Regulations 1977 may also be given.

5.1.1 The container may also be marked with the Standard Mark.

NOTE — The use of the Standard Mark is governed by the provisions of the Bureau of Indian Standards Act 1986, and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers, may be obtained from the Bureau of Indian Standards.

6. SAMPLING

6.1 The method of drawing representative samples of the material and the criteria for conformity shall be as prescribed in Appendix F.

7. TEST METHODS

7.1 The material shall be tested as prescribed in appendices to this standard.

7.2 Quality of Reagents — Unless specified otherwise, pure chemicals and distilled water (*see* IS : 1070-1977*) shall be used in tests.

NOTE — 'Pure Chemicals' shall mean chemicals that do not contain impurities which effect the results of analysis.

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*Specification for water for general laboratory use (*second revision*).

APPENDIX A

(*Clause* 3.1.3)

DETERMINATION OF CONSISTENCY

A-1. PROCEDURE

A-1.1 Maintain an original unopened container of polish at 10 ± 1°C for two hours. Open the cap and examine as given in **A-1.1.1** and **A-1.1.2**.

A-1.1.1 No solid shall separate from the homogeneous liquid mass.

A-1.1.2 The polish shall be easily pourable and applicable.

A-1.2 Repeat the above series of examinations on another container maintained at a temperature of 45 ± 1°C for two hours.

A-1.2.1 No solid shall separate from the homogeneous liquid mass.

APPENDIX B

[*Clause* 3.1 4]

DETERMINATION OF APPLICABILITY

B-1. PROCEDURE

B-1.1 Leather shoe upper piece of size 150 × 150 mm of nearly the same colour as the polish shall be used for testing. The leather piece shall be smooth and matt finished (non-glossy) on the grain side.

B-1.2 Clean the grain surface with a cloth or brush to remove any adherance dust particles. Apply the polish in a thin film to the smooth grain surface by means of the in-built applicator and examine after two minutes for the characteristics described in **B-1.2.1** and **B-1.2.2**.

B-1.2.1 Examine the polished leather piece for gloss visually. In case an approved sample of the polish is available, polish a similar piece of leather and match the gloss obtained with the test sample with that of the approved sample.

B-1.2.2 Place the leather piece (*see* **B-1.2**) which has been allowed to dry for 5 minutes on the pan of a suitable physical balance and counterpoise it with weights. Place an additional weight of 2.5 kg and press the polished surface with thumb till the two pans of the balance are counterpoised. Keep the thumb in this position for one minute and then slowly release.

B-1.2.2.1 There shall be no sign of sticking to the thumb. The thumb impression produced shall be such that it shall be wiped out with a cloth or brush.

APPENDIX C

[*Table* 1, *Sl No.* (i)]

DETERMINATION OF NON-VOLATILE MATTER

C-1. PROCEDURE

C-1.1 Weigh acurately about 3 g of the sample in a tared flat-bottomed dish of approximately 8 cm diameter provided with a cover. Heat without the cover in a steam-bath till the bulk of the volatile matter is volatized off, and then in an air-oven at 115 ± 1°C for approximately 4 hours, cool and weigh. Repeat heating and cooling till the last two weighings differ by not more than one milligram.

C-1.2 Calculation

$$\text{Non-volatile matter, percent by mass} = \frac{B \times 100}{A}$$

where

B = mass in g of the non-volatile residue, and

A = mass in g of the sample taken for test.

APPENDIX D

[*Table* 1, *Sl No.* (ii)]

DETERMINATION OF ASH OF NON-VOLATILE MATTER

D-1. PROCEDURE

D-1.1 Heat about 20g of material in an open dish in a steam-bath for 4 hours and then in an air-oven at 110 to 120°C for 16 hours. Cool and weigh accurately about 2 g of the non-volatile matter as obtained above in a tared porcelain crucible. Ignite to constant weight, taking care that the cooling before each weighing is done in a desiccator.

D-2. CALCULATION

$$\text{Ash of non-volatile matter, percent by mass} = \frac{B \times 100}{A}$$

where

B = mass in g of the ash, and

A = mass in g of the non-volatile residue.

APPENDIX E

[*Table* 1, *Sl No.* (iii)]

DETERMINATION OF *p*H OF THE POLISH

E-1. PROCEDURE

E-1.1 The *p*H of the polish is determined using a *p*H meter (*see* IS : 5741-1970*) with glass electrode at 27 ± 2°C.

APPENDIX F

(*Clause* 6.1)

SAMPLING OF SHOE POLISH, LIQUID

F-1. GENERAL REQUIREMENTS OF SAMPLING

F-1.1 In drawing, preparing, storing and handling test samples, the following precautions and directions shall be observed.

F-1.2 Sample shall be taken in a protected place not exposed to damp air, dust or soot

F-1.3 The sampling instrument shall be clean and dry when used.

F-1.4 Precautions shall be taken to protect the samples, the material being sampled, the sampling instrument and the containers for samples from adventitious contamination.

F-1.5 To draw a representative sample, vertical sections of the polish at uniformly placed points shall be taken and mixed as thoroughly as possible by suitable means.

F-1.6 The samples shall be placed in clean, dry and air-tight glass or other suitable containers on which the material has no action.

F-1.7 The sample containers shall be of such a size that they are almost completely filled by the sample.

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*Method for determination of *p*H.

F-1.8 Each sample containers shall be sealed air-tight after filling and marked with full details of sampling, the date of sampling and the month and year of manufacture of the material.

F-1.9 Samples shall be stored in such a manner that the temperature of the material does not vary unduly from the normal temperature.

F-2. SCALE OF SAMPLING

F-2.0 To determine conformity of a consignment of shoe polish, liquid to this specification, samples shall be selected so as to be representative of the whole consignment. In the absence of any prior agreement between the purchaser and the manufacturer on the mode of sampling and determining the criteria of conformity, the following sampling scheme is recommended to serve as a guide.

F-2.1 Lot — All the containers in a single consignment of the material drawn from the same batch of manufacture and the same size shall constitute a lot. If a consignment is declared or known to consist of different batches of manufacture or of different sizes of containers, the containers belonging to the same batch and size shall be grouped together and each such group shall constitute a separate lot.

F-2.1.1 Samples shall be tested for each lot for ascertaining the conformity of the material to the requirements of this specification.

F-2.2 The number of containers (*n*) to be chosen from a lot shall depend upon the size of the lot (*N*) and shall be in accordance with Table 2.

TABLE 2 NUMBER OF CONTAINERS TO BE SELECTED

LOT SIZE (*N*)	NO. OF CONTAINERS TO BE SELECTED (*n*)
(1)	(2)
Up to 500	10
501 to 1 000	15
Above 1 000	20

F-2.3 These containers shall be chosen at random from the lot. In order to ensure the randomness of selection, some random number table as agreed to between the purchaser and the manufacturer shall be used. For random selection procedures, guidance may be obtained from IS : 4905-1968*.

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*Methods for random sampling.

F-3. PREPARATION OF COMPOSITE SAMPLE

F-3.1 Shake well each of the containers selected in **F-2.3** and test for consistency. Pour out a quantity of polish such that the total quantity obtained from all the containers provides material sufficient for all the tests (about 500 ml). Thoroughly mix the material drawn from all the selected container so as to form the composite sample.

F-4. NUMBER OF TESTS AND CRITERIA FOR CONFORMITY

F-4.1 Test for consistency shall be done on the original containers from which no sample has been drawn.

F-4.2 Tests for other characteristics shall be done on the composite sample.

F-4.3 The lot shall be declared as conforming to this specification if the test results satisfy the corresponding requirements.

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

Quantity	*Unit*	*Symbol*
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

Quantity	*Unit*	*Symbol*
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

Quantity	*Unit*	*Symbol*	*Definition*
Force	newton	N	1 N = 1 kg.m/s^2
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m^2
Frequency	hertz	Hz	1 Hz = 1 c/s (s^{-1})
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m^2

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